

IN THE DRAWINGS:

Attached is a Submission of Replacement Drawing Sheets including a change to Fig. 7. These Replacement Drawing Sheets, which include all of Figs. 1-8 in this application, replace the previously-filed drawing sheets. In these Replacement Drawing Sheets, Fig. 7 has been amended to replace "22a" and "22b" with --22-- and to replace "23a" and "23b" with --23-- in response to the objection to the drawings in the Office Action.

REMARKS

Summary of the Office Action

The drawings stand objected to as allegedly failing to comply with 37 C.F.R. § 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 22 and 23.

The drawings stand objected to under 37 C.F.R. § 1.83(a).

The abstract of the disclosure stands objected to because of the terms “x-ray image detecting means” and “focusing magnification adjusting means.”

The disclosure stands objected to because of alleged informalities.

Claim 1 stands objected to because of alleged informalities.

Claim 3 stands rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite.

Claims 1-3 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nagai et al. (U.S. Patent No. 5,434,901) in view of Thieme et al. (U.S. Patent No. 5,222,113) (hereinafter “Thieme”).

Summary of the Response to the Office Action

Applicants have amended claims 1 and 3, and added new claims 4-6, to differently describe embodiments of the disclosure of the instant application’s specification and/or to improve the form of the claims. Accordingly, claims 1-6 are currently pending for consideration. A Submission of Replacement Drawing Sheets is attached including a change to Fig. 7. Portions of the specification and the abstract have been amended to improve their form.

Objection to the Abstract

The abstract of the disclosure stands objected to because of the terms “x-ray image detecting means” and “focusing magnification adjusting means”. In response, Applicants have amended the abstract to resolve this issue and to improve its form. Accordingly, withdrawal of the objection to the abstract is respectfully requested.

Objection to the Drawings

The drawings stand objected to as failing to comply with 37 C.F.R. § 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 22 and 23. In response, in the Submission of Replacement Drawing Sheets filed concurrently herewith, Applicants have amended the drawings by Applicants have amended Fig. 7 to replace “22a” and “22b” with --22-- and to replace “23a” and “23b” with --23-- in accordance with the discussion in the specification. The drawings also stand objected to under 37 C.F.R. § 1.83(a). In light of the amendments to the claims, Applicants respectfully submit that these objections have been addressed and overcome. Accordingly, Applicants respectfully request that the objections to the drawings be withdrawn.

Objection to the Disclosure and Claim 1

The disclosure stands objected to because of alleged informalities. Claim 1 stands objected to because of alleged informalities. The disclosure and claim 1 have been amended in accordance with the Examiner’s comments in the Office Action at page 4, sections 5 and 6.

Accordingly, withdrawal of the objections to the disclosure and claim 1 are respectfully requested.

Rejection under 35 U.S.C. § 112, second paragraph

Claim 3 stands rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Applicants have amended claim 3 in accordance with the Examiner's comments at page 5 of the Office Action. Applicants respectfully submit that claim 3, as amended, fully complies with the requirements of 35 U.S.C. § 112, second paragraph. Accordingly, Applicants respectfully request that the rejections under 35 U.S.C. § 112, second paragraph be withdrawn.

Rejection under 35 U.S.C. § 103(a)

Claims 1-3 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nagai in view of Thieme. Applicants have amended claims 1 and 3 to differently describe embodiments of the disclosure of the instant application's specification. To the extent that these rejections might be deemed to apply to the claims as newly-amended, they are respectfully traversed for at least the following reasons.

Applicants respectfully submit that embodiments of the disclosure of the instant application, as described in the claims, utilize a Wolter optical system in a novel way that enables an adjustable magnification. In a Wolter optical system, the distances "a" and "b," as illustrated in Fig. 1 of the instant application, have conventionally been understood being required to remain fixed because of the performance of a grazing incidence mirror, thereby requiring the magnification to remain fixed as well. However, Applicants respectfully submit

that the inventor of the instant application's disclosure discovered by ray tracing simulation that the image can still be formed even if these distances "a" and "b" are adjusted at the sacrifice of the associated resolution within an allowable degree as illustrated in Fig. 2 of the instant application.

Applicants respectfully submit that although the applied Nagai reference discloses the use of a Wolter optical system, it does not disclose, or even suggest, magnification adjustment of such a system, to any extent. In addition, the applied Thieme reference concerns a zone plane optical system and it does not suggest the idea of magnification adjustment while employing a Wolter optical system. In fact, Applicants respectfully submit that Thieme instead discourages such an idea of adjusting magnification while employing a Wolter optical system by explicitly teaching that a Wolter optical system is intolerant in imaging error. See col. 1, lines 12-24 of Thieme. Therefore, Applicants respectfully submit that a skilled person would not be motivated to combine Nagai and Thieme in the manner asserted by the Office Action, at least because Thieme teaches away from such a combination. In addition, even assuming, strictly arguendo, that one might be led to combine these two references, at least the advantageous features of adjusting magnification in a Wolter optical system would still not be met because neither of the applied references teaches, or even suggests, such an arrangement.

Accordingly, Applicants respectfully assert that the rejections under 35 U.S.C. § 103(a) should be withdrawn because neither Nagai nor Thieme, whether taken singly or combined, teach or suggest each feature of independent claim, as amended. MPEP § 2143.03 instructs that “[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 409 F.2d 981, 180 USPQ 580 (CCPA 1974).”

Furthermore, Applicants respectfully assert that dependent claims 2-3 are allowable at least because of their dependence from claim 1 and the reasons set forth above.

Newly-Added Claims

Applicants have added new dependent claims 4-6 to differently describe embodiments of the disclosure of the instant application. Applicants respectfully assert that dependent claims 4-6 are allowable at least because of their dependence from claim 1, the reasons set forth above, and for the additional features that they recite.

CONCLUSION

In view of the foregoing, Applicants submit that the pending claims currently under consideration are in condition for allowance, and respectfully request reconsideration and timely allowance of these claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative to expedite prosecution. A favorable action is awaited.

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. § 1.16 and 1.17 which may be required, including

any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0573.

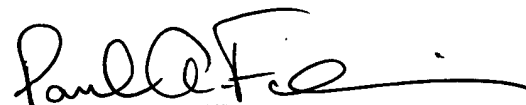
This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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